Remarks/Arguments

Claims 1-13 are pending and are rejected.

Claims 1, 9, 11, 12, and 13 are amended. Claims 14-20 are added. Claim 11 is amended to correct a typographical error.

FIG. 1 is amended to correct the reference numeral to a subwoofer signal processing and power amplifier. The reference numeral should be "55." A formal drawing of FIG. 2 is also included.

CLAIM REJECTION

Responsive to the rejection of claims 1-13 under 35 U.S.C. 102(b) as being anticipated by US 5,636,288 ("Bonneville"), applicant respectfully submits that Bonneville does not anticipate these claims because, as discussed below, the control circuit recited in these claims would be missing if Bonneville is interpreted in the manner stated in the Office Action. However, in the interest of advancing the prosecution, applicant has amended independent claims 1, 9, 12, and 13 to more particularly point out and distinctly claim the subject matter that applicant regards as the invention. Independent claims 12 and 13 are amended to depend from amended claim 9. Applicant submits that Bonneville does not anticipate amended claim 1 and dependent claims 2-8, and amended claim 9 and dependent claims 10-13, as discussed below.

a) Claims 1-8

Claim 1 is amended to recite that the variable-impedance means is not coupled between the common power supply and the main circuit. Support for this feature can be found, for example, on FIG. 1. Specifically, amended claim 1 recites a power supply circuit arrangement switchable between modes, comprising a main circuit and an auxiliary circuit, each coupled to derive their power supply voltage/current from a

common power supply; a control circuit having detector means for detecting the level of a signal and providing a control action responsive to the detected level of the signal, and variable-impedance means coupled between the common power supply and the auxiliary circuit and responsive to the control action for switching between first and second impedance states, producing respective first and second power supply voltages/currents being received by the auxiliary circuit from the power supply, wherein the first and second voltages/currents correspond to operating and non-zero reduced power modes respectively, and the variable-impedance means is not coupled between the common power supply and the main circuit. Thus, the common power supply supplies power to both the main and auxiliary circuits, but the variable-impedance means is in the path to the auxiliary circuit, and not in the path to the main circuit. A purpose of this arrangement is to prevent a sub-woofer amplifier (the auxiliary circuit) from drawing too much power from a shared power supply, so that the other amplifiers (the main circuit) can get sufficient power to fully reproduce other sounds. See, for example, page 1, line 33-page 2, line 17, and page 3, lines 17-24.

By contrast, Bonneville discloses a power supply circuit, which permits switching between operational and standby modes while providing a desired degree of electrical isolation and/or reduced power consumption. See col. 1, lines 44-50. The power supply circuit supplies power to a main amplifier circuit 12, which drives a sub-woofer loudspeaker 10. See FIG. 1, and col. 3, lines 20-23. One input terminal of the power supply is coupled in series with a switch 26, which is in parallel with an impedance 28. See FIG. 1. A control circuit 30 controls the operation of the switch 26. See FIG. 1, and col. 3, lines 39-40. The control circuit 30 receives DC power from the power supply

and couples four audio input lines 32 to the main amplifier circuit 12. See FIG. 1, and col. 3, lines 40-44.

When the control circuit 30 detects an audio signal on one of the audio lines 32, it closes the switch 26, short-circuiting the impedance 28 and resulting in the power supply receiving full AC voltage (120 Volts) and producing normal operating DC output of 40 volts for the main amplifier circuit 12 and the control circuit 30. See col. 3, lines 55-62. When no audio input has been present on lines 32 for a predetermined period, the control circuit 30 opens the switch 26, inserting the impedance 28 to the AC input, resulting in lower input AC voltage to the power supply and lower output DC voltage from the power supply for the main amplifier circuit 12 and the control circuit 30.

The main amplifier circuit 12 is inoperative at the reduced supply voltage. See col. 6, lines 5-6. As pointed out in the Office Action, other circuits (not shown in FIG. 1) connected in common with either the main amplifier circuit 12 or the control circuit 30 may be operative at the reduced supply voltage. See col. 6, lines 6-10.

The Office Action relies upon the AC power supply supplying AC voltage to the power supply circuit shown in FIG. 1 as the common power supply as recited in claim 1 because, according to claim 1, the impedance 28 (relied upon as the variable-impedance means) is coupled between the common power supply and the main amplifier circuit 12 (relied upon as the auxiliary circuit). However, if the AC power supply is interpreted as the common power supply, the common power supply does not include the control circuit 30 (relied upon as the control circuit) because the control circuit 30 is part of the power supply shown in FIG. 1 not part of the AC power supply. Thus, Bonneville does not anticipate original and amended claim 1 for this reason alone.

Furthermore, even interpreting the main amplifier circuit 12 as the auxiliary circuit and other circuits (not shown in FIG. 1) connected in common with the main amplifier circuit 12 as the main circuit as the Office Action, Bonneville still does not disclose or suggest that the impedance (relied upon as the variable-impedance means) is coupled between the AC power supply and the main amplifier circuit 12 (relied upon as the auxiliary circuit) but not between the AC power supply (relied upon as the common power supply) and the other circuits connected in common with the main amplifier circuit 12, as recited in amended claim 1, because the main amplifier circuit 12 and the other circuits derive power from the same point.

Lastly, even if we interpret the power supply shown in FIG. 1 as the common power supply, Bonneville still does not disclose or suggest that the impedance (relied upon as the variable-impedance means) is coupled between the AC power supply and the main amplifier circuit 12 (relied upon as the auxiliary circuit) but not between the AC power supply (relied upon as the common power supply) and the other circuits connected in common with the main amplifier circuit 12, as recited in amended claim 1, again , because no variable-impedance is present between the power supply and the main amplifier circuit 12 and the other circuits connected in common with the main amplifier circuit 12.

In light of the fact that Bonneville does not disclose or suggest a power supply arrangement including a control circuit if interpreted in the manner stated in the Office Action and does not disclose or suggest that the power supply includes a variable-impedance means coupled between the common power supply and the auxiliary circuit but not between the common power supply and the main circuit, as recited in amended

claim 1, applicant submits that amended claim 1, and dependent claims 2-8, are patentable over Bonneville.

b) Claims 9-13

Amended claim 9 recites a power supply arrangement comprising: an output for providing a first operating voltage to a first circuit; a control circuit having detector means for detecting the level of a signal and providing a control action responsive to the detected level of the signal; variable-impedance means coupled between the output and a second circuit, and switchable between higher and lower impedance states by the control action; wherein, in the lower impedance state, a power supply voltage provided to the second circuit is a second operating voltage of the second circuit, which is no greater than the first operating voltage, and in the higher impedance state, the power supply voltage provided to the second circuit is a third operating voltage, which is less than the second operating voltage. The underlined features are added, support of which can be found, for example, on FIG. 1 and page 7, lines 3-16.

As discussed above, the Office Action relies upon the AC power supply supplying AC voltage to the power supply circuit shown in FIG. 1 as the power supply because the impedance 28 (relied upon as the variable-impedance means) is coupled between an output of the AC power supply and the main amplifier circuit 12 (relied upon as the auxiliary circuit). However, if the AC power supply is interpreted as the power supply, the control circuit 30 (relied upon as the control circuit) recited in claim 9 is missing because the control circuit 30 is part of the power supply shown in FIG. 1 not the AC power supply. Thus, Bonneville does not anticipate original and amended claim 9 for this reason alone.

Furthermore, the impedance 28 (relied upon as the variable-impedance means) is coupled between the AC power supply and the power supply shown in FIG. 1, which supplies DC output voltage to the main amplifier circuit 12 (relied upon as the second circuit). The impedance 28, however, is not coupled between an output of the power supply shown in FIG. 1 and the main amplifier circuit 12, as recited in claim 9.

Lastly, the voltage supplied to other circuits (relied upon as the first circuit) connected in common with the main amplifier circuit 12 and the voltage supplied to the main amplifier circuit 12 (relied upon as the second circuit) are always the same in either higher impedance or lower impedance state because they derive the power from the power supply at the same point. Thus, in the higher impedance mode, the voltage (may be relied upon as the third operating voltages) supplied to the main amplifier circuit 12 (relied upon as the second circuit) is always the same as the first operating circuit supplied to the first circuit. By contrast, amended claim 9 recites that the second operating voltage is no greater than the first operating voltage and the third operating voltage is less than the second operating voltage. Thus, the third operating voltage is less than the first operating voltage. As such, amended claim 9 is patentable over Bonneville for this reason alone.

In light of the fact that that Bonneville does not disclose or suggest a power supply arrangement including a control circuit if interpreted in the manner stated in the Office Action, does not disclose or suggest that the power supply includes a variable-impedance means coupled between an output of the power supply and the second circuit, as recited in amended claim 9, and does not disclose and suggest that the third operating voltage is less than the first operating voltage, as recited in amended claim 9,

applicant submits that amended claim 9, and dependent claims 10-11, are patentable over Bonneville.

Claim 12 is amended to depend from amended claim 9 and recites that the first and second circuits are speaker drive circuits. Support for this feature can be found, for example, on FIG. 1. Amended claim 12 is patentable over Bonneville for its dependence from amended claim 9. Furthermore, Bonneville does not disclose or suggest that other circuits (relied upon as the first circuit) can be a speaker drive circuit, as recited in amended claim 12. As such, amended claim 12 is patentable over Bonneville for this reason alone.

Claim 13 is amended to depend from amended claim 12 and recites that the second operating voltage corresponds to a voltage required by the second circuit under a normal operation, and the third operating voltage is less than the required voltage. Support for this feature can be found, for example, in claim 2 and on page 6, lines 34-37. Amended claim 13 is patentable over Bonneville for its dependence from amended claims 9 and 12.

c) New Claims

New claim 14, which depends from claim 12, recites that the second circuit drives a sub-woofer loudspeaker for outputting a sub-woofer signal from an audio source and the control circuit detects the level of the sub-woofer signal to provide the control action. Support for this feature can be found, for example, on FIG. 1, and page 7, lines 23-34. New claim 14 is patentable for its dependence from amended claims 9 and 12.

New claim 15 recites that if the detected level exceeds a predetermined threshold, the control action causes the variable-impedance means to switch to the

higher impedance state. Support for this feature can be found, for example, on page 6, lines 31-34. New claim 15 is patentable for its dependence from amended claim 9.

New claim 16 recites that the second operating voltage is less than the first operating voltage. Support for this feature can be found, for example, on page 7, line 7, where the specification states that the low impedance state needs not be a short circuit. New claim 16 is patentable for its dependence from amended claim 9. Furthermore, Bonneville does not disclose or suggest the three different operating voltages, as recited in new claim 16. As such, new claim 16 is patentable for this reason alone.

New claims 17-20 are similar to claim 12, claim 13, new claim 14, and new claim 15, respectively, and are patentable over Bonneville for similar reasons.

CONCLUSION

Having fully addressed the Examiner's objections and rejections it is believed that, in view of the preceding amendments and remarks, this application stands in condition for allowance. Accordingly, reconsideration and allowance are respectfully solicited. If, however, the Examiner is of the opinion that such action cannot be taken, the Examiner is invited to contact the applicant's attorney at (609) 734-6813, so that a mutually convenient date and time for a telephonic interview may be scheduled.

FEE

No fee is believed due. However, if a fee is due, please charge the fee to Deposit Account 07-0832.

Respectfully submitted,

By: Reitseng Lin
Reg. No. 42,804
Phone (609) 734-6813

Patent Operations
Thomson Licensing Inc.
P.O. Box 5312
Princeton, New Jersey 08540
July 21, 2004

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